Appendix D

Quality Management Plan for Construction-Operations

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Changes to this document require the concurrence of the CO Branch Chiefs and approval by the Chief, CO, and shall only be made following the procedures described herein.

CONTENTS

1.0 Purpose

The purpose of this document is to state the policies and procedures for the execution of quality management activities within the Sacramento District=s Construction-Operations Division.

2.0 Scope

The policies and procedures stated herein apply to all the elements in Construction-Operations Division including Construction, Regulatory, Operations, and Emergency Management. This plan will be reviewed annually and updated as appropriate.

3.0 References

a. CESPD R 1110-8, Quality Management Plan

b. ER 1180-1-6, Construction Quality Management

4.0 Definitions:

See CESPD R 1110-8 for applicable definitions.

5.0 Policy

It is the policy of CESPK-CO to develop and implement quality management practices, including quality assurance (QA) and quality control (QC), that ensure that technical products meet the agreed upon requirements of the customer and appropriate laws, policies and technical criteria, on schedule and within budget. Adherence to quality principles and established quality assurance and quality control practices is integral with the roles and responsibilities of all CESPK-CO. QA and QC practices outlined herein shall also be consistent with other quality management practices prescribed by USACE including Total Quality Management (TQM), Value Engineering (VE) and ISO 9000.

6.0 CONSTRUCTION QUALITY MANAGEMENT

6.1 Purpose: This plan provides the Sacramento District=s annual construction quality assurance organizational operating plan pursuant to ER 1180-1-6 (Construction Quality Management).

6.2 Applicability: This plan applies to construction activities within the Sacramento District. Construction programs include civil works, OMA, MILCON, HTRW, WFO and SFO.

6.3 Organization:

a. Within CESPK, construction quality assurance is the responsibility of Construction-Operations Division. This is carried out in accordance with the precepts of ER 1180-1-6, "Construction Quality Management".

b. The quality assurance program is managed with the organization that is described within the Sacramento District

Construction Quality Assurance Organizational Operating Plan. This plan is revised annually to reflect the current staffing in the field and district offices.

6.4 Responsibilities:

6.4.1. CESPK-CO-C shall annually prepare the district=s quality assurance organizational operating plan (required per ER 1180-1-6.) This plan will be forwarded to CESPD-ET-C for review, approval, and subsequent forwarding to HQUSACE.

6.4.2. CESPK-CO-C staff shall make periodic visits to field offices to verify that contractor QC plans and government QA plans are in place and are effective.

6.4.3. CESPK-CO-C has primary responsibility within SPK to manage annual CESPD Design/Construction Evaluation (DCE) visits within the district.

6.4.4. The Resident Offices have the responsibility for doing the direct quality assurance of the construction contractors= quality control systems.

6.5 Training:

6.5.1 CESPK-CO-C shall manage the presentation of the "Construction Quality Management Course for Contractors". The course will be conducted a total of 4 to 8 times per year and be presented in Sacramento and Utah.

6.5.2. CESPK-CO-C personnel will conduct training sessions in the field offices periodically. These sessions will supplement the mentoring conducted while QA Section personnel do the bi-annual field inspections. The topics of this training will usually be technical in nature

6.5.3 The district shall maintain training matrices that display which personnel have what QA expertise within the district and each field office.

6.6 Pre-award QA:

6.6.1. CESPK-CO-C shall manage the BCOE review efforts carried out by the construction activities in the district and the field. All reviews will be conducted by the Construction Quality Assurance Section, with plan-in-hand BCOE review input from the field offices. All BCOE review comments will be placed in the Automated Response Management System ("ARMS"). The BCOE certification process will be in accordance with ER 415-1-11.

6.6.2. Based on available advance information, district and field personnel will obtain necessary training to be able to perform QA on construction projects, including those with unusual requirements.

6.7 Post-Award QA:

6.7.1. The District field offices have primary responsibility for post-award QA activities including QA reporting, participation in the 3 phase inspection system, ad hoc problem solving, deficiency monitoring, QA testing,

construction safety, and schedule maintenance.

6.7.2. All Quality Control will be accomplished by the construction contractors according to their approved Quality Control plans. Quality assurance will be performed using the procedures in the district=s Construction Quality Assurance Organizational Operating Plan and the individual Quality Assurance plans developed in the field offices for the construction projects.

6.7.3. CESPK-CO-C shall manage at the district level those programs that recognize outstanding achievement in quality assurance, e.g. the Hard Hat of the Year award, the Construction Manager of the Year award, the Military Construction Contractor of the Year award, the Civil Works Construction Contractor of the Year award, and the Dredging Contractor of the Year award.

7.0 OPERATIONS QUALITY MANAGEMENT

7.1 Purpose: This document presents Construction-Operations Division policy and procedures implementing South Pacific Division guidance concerning the execution of quality management activities within the Operations element.

7.2 Applicability: This document applies to all business functions within the Operations element.

7.3 References: CESPD Regulation No. 1110-1-8 and references appearing in appendices to this document applicable to individual business functions.

7.4 Responsibilities: Operations Technical Branch (OTB) will develop quality management practices for each Operations element business function. These functions include navigation, environmental stewardship, recreation and flood control. OTB will ensure that the quality management practices embodied in the appendices to this Policy Memorandum are prepared in a timely manner and are modified as necessary to adapt to changing conditions. Area managers and other District elements are responsible for assisting OTB in developing and following quality management practices.

7.5 Definitions: This Policy Memorandum incorporates the definitions listed in Paragraph 4 of CESPD Regulation 1110-1-8.

7.6 Policy: The OTB Chief, Area Managers and all personnel involved in inspecting or reviewing products associated with the operation and maintenance of Civil Works control projects are to adhere to the requirements of this Quality Management Plan (QMP). OTB will provide quality assurance review of the Area Offices and their associated Civil Works projects to ensure the quality of Operations and Maintenance products and services. OTB and Area Offices will meet the quality objectives by executing this QMP and the appended Quality Control Plans (QCP).

7.7 Quality Management Plan: A Quality Management Plan is a plan stating the management practices and business procedures ensuring the quality of a product. This is distinct from the Quality Control Plan which documents the product to be reviewed and addresses details such as the review team, review schedule and review product. A QCP for each Operations business function is appended to this Policy Memorandum. The QCP identifies activities to be accomplished by OTB in ensuring that quality management practices are being followed within the business function. Some of the activities may encompass several business functions. Operations element

QCP's address: Master Plans , Operational Management Plans, Inspection of Recreation Areas and Administrative Facilities, Inspection of Federal Flood Control Projects Operated and Maintained by Non-Federal Sponsors , Inspection of Navigation Projects, and Environmental Compliance Inspection.

8.0 REGULATORY QUALITY MANAGEMENT

8.1 Background: As a result of establishing the Regulatory Branch, decision making and signature authority on regulatory actions has been further decentralized. Currently, the Regulatory Office Chiefs and Section Chiefs are the decision makers on the vast majority of actions produced by the Branch. This decentralized decision making leads to the possibility of inconsistent or incorrect application of Regulatory policies or procedures. Accordingly, a quality control plan is needed to assure that proper and consistent policies and procedures are applied throughout the Branch.

8.2 Applicable Regulatory Actions: This quality control plan is applicable to the following actions:

a. Standard Permits
b. General Permits
c. Jurisdictional Delineations
d. Permit Compliance
e. Enforcement Actions

8.3 Quality Control Criteria: The following criteria will be used to evaluate the acceptability of products or actions produced by the Branch. Goals for acceptable quality for products or services are shown on Table 1, attached. Actions failing to meet these criteria will be reported to the Branch Chief and measures such as training and/or guidance will be provided to assure future compliance.

8.3.1. Application of Regulations, Guidance, and Procedures: Actions must be completed in accordance with all appropriate regulations, guidance, and procedures.

8.3.2. Protection of Aquatic Environment: Permit and enforcement actions should result in appropriate and practical measures to preserve and protect the aquatic environment.

8.3.3. Efficiency of Actions: Actions should be completed within established timeliness goals and, if not, measures should be taken to minimize delays.

8.4 Quality Control Plan: The following actions will be taken to insure that Regulatory products and actions meet the above criteria.

8.4.1. Training: All Regulatory Project Managers will attend REG II-VI training as soon as possible after assignment to the Branch, depending on funding and training space availability. In addition, an annual refresher seminar will be provided for all Office and Section Chiefs on correct and consistent policies and procedures to be used in the applicable regulatory actions. Scheduling, organizing, and facilitating this seminar will be the responsibility of the Branch Chief. The South Pacific Division Regulatory Coordinator will be invited to participate to insure consistency within the Division.

8.4.2. Sampling of Completed Actions: At least annually, a representative sample of completed actions will be

audited to determine compliance with the quality control criteria. The Branch Chief will be responsible for auditing actions taken by the Section Chiefs. The Section Chiefs will audit actions completed by the Office Chiefs and will report their results to the Branch Chief. Samples will be chosen at random from list(s) of completed actions generated by RAMS. At least 20 percent of permit actions, enforcement actions, and jurisdictional delineations completed during the previous year will be sampled at each annual audit. Permit compliance audits will be based on random samples from list(s) generated by the RAMS system administrator of permits which required greater than 0.25 acre of mitigation. At least 20 such actions will be reviewed in each section at each audit. Audit results will be reported by action id on Table 2, attached.

8.4.3. Field Evaluations: At least annually, the Section or Office Chief will accompany each Project Manager to field site(s) to review and evaluate his/her skill in making wetland delineations, ordinary high water mark determinations, and any other field skills needed to perform their duties.

8.5 Quality Assurance: It will be the responsibility of the Branch Chief to assure that the quality control plan is implemented and that discrepancies discovered as a result of training, audits and field evaluations are corrected.

TABLE 1

REGULATORY PROGRAM QUALITY CONTROL GOALS

Regulatory Action	Quality Control Goals
Standard Permits	1. Appropriate regulations, guidance, and procedures were used. 2. Appl'n reviewed for completeness within 15 days of receipt. 3. Public Notice issued within 15 days of complete application. 4. Comments sent to appln't within 15 days of close of Public Notice. 5. Decision made within 15 days of obtaining all necessary information. 6. Least damaging practicable alternative permitted. 7. Reasonable and practicable mitigation measures adopted. 8. Documentation complete and adequate to support decision.
General Permits	1. Appropriate regulations, guidance, and procedures were used. 2. PCN completed within regulatory time limits. 3. Verification letter within 60 days of receipt. 4. Activity complies with terms/conditions of RGP or NWP. 5. Impacts individually/cumulatively minimal.
Jurisdictional Delineations	1. JD correct and made in conformance with current manual for delineating jurisdictional wetlands. 2. OHW determinations correct and made in accordance with regulations (33 CFR 328.3(e)). 3. Verification letter sent within 60 days of receipt.
Permit Compliance	1. Compensatory mitigation areas inspected for compliance until area is deemed successful. 2. Mitigation monitoring reports reviewed and comments provided, as appropriate. 3. Action taken to obtain compliance when non-compliance with permit conditions is determined. 4. Compensatory mitigation area successful in meeting criteria of permit conditions and/or mitigation plan.
Enforcement	1. Appropriate regulations, guidance, and procedures were used. 2. Report of violation prioritized and investigated within appropriate time frame depending on the magnitude and severity of the alleged violation (appropriate time = 5 days for major violation, 30 days for minor violation). 3. C&D letter sent within 15 days of confirmation of violation. 4. Resolution by accepting A-T-F permit, directing restoration, forwarding case to OC, or other means occurred within 90 days of C&D. 5. Restored areas and compensatory mitigation comply with Corps directives.

9.0 READINESS QUALITY MANAGEMENT

9.1 PROJECTS: Post Flood Rehabilitation, within Sacramento District Civil Work Boundaries.

9.2 DESCRIPTION OF PRODUCTS: The products to be addressed under this Quality Management Plan (QMP) will be Project Information Reports (PIR's) and construction plans and specifications (P&S). The documents will deal with the repair of damages to flood control structures resulting from floods in SPK.

9.3 NAMES AND LOCATIONS OF CUSTOMERS: Various

9.4 QUALITY CONTROL PLAN OBJECTIVE: This QMP establishes independent technical review procedures for a large number of projects of varying sizes with the objective of ensuring high quality PIR's and contract documents, completed on time and within budget.

9.5 SEAMLESS REVIEW PROCESS: To facilitate a seamless review process, subproducts will be technically overviewed before they are integrated into the overall product. To facilitate this, technical section chiefs and/or senior personnel shall be responsible for providing an overview/peer check of major assumptions, analytical approaches, and significant calculations throughout the design effort. Additionally, the Design Team members will consult with their Independent Technical Review Team (ITRT) counterparts during the design effort to discuss assumptions, procedures, and/or results to preclude significant conflicts from occurring during the final independent technical review.

9.6 INDEPENDENT TECHNICAL REVIEW:

9.6.1. Because of the involvement of the Sacramento District in responding to a flood emergency SPL, SPN, OR SPA will be requested to assist by performing the Independent Technical Review for the rehabilitation documents. Technical specialists will be named to the ITRT representing the disciplines that might be encountered in the review of the expected documents. In addition to the primary ITRT members, alternates will also be named to the team. This approach was adopted because a large volume of documents is expected for review on a continuous basis over a relatively long time (up to about one year). During that period, conflicting demands for the reviewers' time (such as illnesses, training, annual leave and other work) are likely to arise. The alternates may also be used, if necessary, to form a second ITRT at times of peak work loads.

9.6.2. The technical reviews of the rehabilitation documents will be conducted in a manner consistent with Regulation No. I 110- 1 -8, Directorate of Engineering and Technical I Services, Quality Management Plan, dated 30 June 1997. The reviews will ensure that the policy and procedural requirements, as defined in the ER 500-1-1, March 1991, and other relevant guidance, are met.

9.6.3. The personnel identified will be available, on an as needed basis, to review the documents submitted. However, because of the need to expedite the reviews for the projects addressed in this plan, the numbers of reviewers for the two types of products will be limited to the extent possible. Unless project conditions dictate otherwise, the reports will be reviewed by an economist, an environmentalist, a soils engineer (will review for materials, also) a cost engineer, and a hydraulics engineer. The plans and specifications will be reviewed by a civil designer, a hydraulics engineer, a structural engineer (when needed), a soils engineer (will review for materials, also), an environmentalist, and a geologist. The products will be reviewed for :

(1) Scope
(2) Adequate level of detail
(3) Compliance with applicable laws and regulations, appropriate guidelines and established policy

(4) Consistency
(5) Accuracy
(6) Comprehensiveness

9.6.4. An independent technical review will not be conducted on plans and specifications for contracts with an estimated construction cost of less than $1 million.

9.6.5. The normal review period for a PIR will 2 days.

9.6.6. PIR's not resulting in rehabilitation construction recommendations will not be subject to independent technical review.

9.7 MAJOR MILESTONES: Schedules for the various projects to be submitted and reviewed have not been established. The following list is an outline of major tasks required for each project.

	Schedule (days)
- Prepare PIR and Environmental Assessment (EA)	30
- Independent Technical Review of PIR and EA	2
- Submit PIR and EA to SPD	2
- Prepare P&S	10
- Independent Technical Review of P&S	4
- Advertise	15

9.8 CONFLICT RESOLUTION PROCEDURES: All comments raised in the Independent Technical Review will be documented in a comment, response, action required and action taken format. The ITRT leader will review the documentation to identify any outstanding disagreements between members of the design team and the ITRT. Any conflicts identified by a designer or independent technical reviewer during the seamless review process will be brought immediately to the attention of the ITRT leader. If the ITRT leader cannot facilitate a resolution of the disagreement, he will raise it expeditiously to the appropriate Sacramento District functional chief(s) for resolution. The Sacramento District Engineering Division Chief will be the final arbiter of such disagreements.

9.9 CONSTRAINTS AND REVIEW: Preparation and approval of the PIR's and the P&S will be accomplished within the approved budget and schedule. Document preparation and reviews will be accomplished in the following sequence:

- Prepare PIR and EA
- ITRT review of PIR and EA
- Revise PIR and EA
- Submit PIR and EA to SPD
- Prepare P&S
- ITRT review P&S
- BCO review
- Address comments
- P&S approved
- Reproduction of P&S

9.10 ENVIRONMENTAL DOCUMENTATION: The environmental documents prepared for this project will be reviewed by the

members of the ITRT to ensure consistency between the environmental documentation and the P&S.

9.11 UNIQUE, SENSITIVE OR HIGH VISIBILITY ITEMS: Federally listed species that could possibly be affected by construction of the proposed projects include valley elderberry longhorn beetle, delta smelt, giant garter snake, winter run salmon, Sacramento split tail (proposed for listing), bald eagle, and American peregrine falcon. State listed species include Swainson's hawk, yellow billed cuckoo and bank swallow. Measures to avoid impacts to endangered species will be addressed in the contract documents.